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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/813,767	03/21/2001	John C. Murphy	1414-SPL	2415

7590

03/27/2003

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EXAMINER

STRECKER, GERARD R

ART UNIT

PAPER NUMBER

2862

DATE MAILED: 03/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/813,767

Applicant(s)

Murphy

Examiner

G.R. Strecker

Group Art Unit

2862

--The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address--

Period for Response

A SHORTENED STATUTORY PERIOD FOR RESPONSE IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a response be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for response specified above is less than thirty (30) days, a response within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for response is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to respond within the set or extended period for response will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☒ Responsive to communication(s) filed on 1/14/03
- ☒ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-25 is/are pending in the application.
- Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-11, 19-23 and 25 is/are rejected.
- ☒ Claim(s) 12-18 and 24 is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
 - ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
 - ☐ received in Application No. (Series Code/Serial Number) _____
 - ☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
- ☐ Interview Summary, PTO-413
- ☐ Notice of References Cited, PTO-892
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☒ Other Translation of 64-35824

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Claims 1-3, 7, 11, 19, 20, 22 and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Okamura (Japan 64-35284, made of record in the prior Office action).

A translation of the Okamura document is provided with this office action.

Okamura discloses (Fig. 1) a magnetometer comprising: a mechanically resonant electrically conducting string (4, for example) in the form of a light conducting fiber coated with an electrically conducting material, the string receiving a current (from AC current source 8); a light source (1) for inserting light into the fiber; and means (4-1 and 4-2) for supporting the string in tension at two locations. The magnetometer is placed in a magnetic field (11-1) to be detected, the magnetic field being perpendicular to the direction of the current and producing a Lorentz Force perpendicular to the string. By virtue of such arrangement Okumara's string would be capable of vibrating in any direction orthogonal to its axis such that deflection along multiple axes can be detected. Optical means (12, 13, etc) are provided for detecting deflection in the fiber. Okamura also discloses a plurality of magnetometers (4, 5, 6) joined end to end (claim 7).

Claims 4, 5, 8, 9, 21 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okamura.

As indicated at page 5, lines 14, 15, of the Okamura translation, appropriate supporting tensions for the fiber string are selected. Although Okamura does not show means for varying the tension of the string, it would have been obvious to include a string tension varying means with Okamura's magnetometer, as a necessary adjunct, for creating and maintaining a desired

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tension, to obtain optimum operation of the magnetometer. Piezo elements are conventionally employed for varying tension of strings in stringed devices.

Claims 6 and 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is not clear how the plurality of strings of claims 6 and 10 are related to the conducting string of claim 1. Nor is it clear of what the resonant frequency is changed.

Claims 6 and 10 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Claims 12-18 and 24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication should be directed to G. R. Strecker at telephone number 305-4937.

Strecker/ek

03/24/03


GERARD R. STRECKER
PRIMARY EXAMINER